IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): An IPATM transmission network that supports multipoint-to-multipoint multi-casting between groups of end points, said network comprising:

a plurality of nodes;

a plurality of endpoints adapted to act as data senders, or receivers, said nodes and endpoints being linked by ATM, wherein at least one sender and all receivers belong to a multi-casting group of endpoints, the at least one sender and all receivers are located on a single spanning delivery tree, and only one virtual circuit (VC) is employed to transmit data over said single spanning deliver tree;

a group having members closely located to each other configured to use a multi-cast group address held by an MNS server located close to said group members; and

the MNS server located close to said group members is selected by requesting a local MNS server for a new multi-cast group address from a host, said local MNS server being configured to supply a multi-cast address from its own addresses, or said local MNS server being configured to supply an address for a nearest located other MNS server if said local MNS server has no unused addresses.

Claim 2 (Currently Amended): An IPATM transmission network that supports multipoint-to-multipoint multi-casting between groups of endpoints, said network comprising:

a plurality of nodes;

a plurality of endpoints adapted to act as data senders, or receivers, said nodes and endpoints being linked by ATM,

wherein said IPATM transmission network includes means for building a single spanning delivery tree between at least one sender and all receivers that belong to a multi-casting group of endpoints, ~~and~~ only one virtual circuit (VC) is employed to transmit data over said single spanning delivery tree, and an endpoint in the multi-casting group of endpoints receives an address of a core from one of a plurality of MNS servers based on a message passed between at least two of the MNS servers.

Claim 3 (Previously Presented): An IPATM transmission network, as claimed in claim 1, wherein said single spanning delivery tree is a CBT rooted in a core node.

Claim 4 (Previously Presented): An IPATM transmission network, as claimed in claim 3, wherein said CBT is built at an ATM level.

Claim 5 (Previously Presented): An IPATM transmission network, as claimed in claim 3, wherein said IPATM transmission network includes relocation means for relocating the core.

Claim 6 (Previously Presented): An IPATM transmission network, as claimed in claim 1, wherein said IPATM transmission network is adapted to have more than one active core, said more than one active core being geographically remote from each other.

Claim 7 (Previously Presented): An IPATM transmission network, as claimed in claim 1, further comprising forwarding means for forwarding traffic only to those branches of said single spanning delivery tree where said traffic is required.

Claim 8 (Previously Presented): An IPATM transmission network, as claimed in claim 7, wherein operation of said forwarding means does not depend on a location of a core.

Claim 9 (Previously Presented): An IPATM transmission network, as claimed in claim 3, wherein said IPATM transmission network includes MNS means for providing an ATM address for a core, on receipt of an IP multi-cast address.

Claim 10 (Previously Presented): An IPATM transmission network, as claim in claim 9, wherein said MNS means is adapted to provide core point management and multi-cast group management.

Claim 11 (Previously Presented): An IPATM transmission network, as claimed in claim 9, wherein said MNS means includes a hierarchy of MNS servers.

Claim 12 (Previously Presented): An IPATM transmission network, as claimed in claim 9, wherein said IPATM transmission network has only one MNS server, that said only one MNS server is responsible for all multi-cast group addresses.

Claim 13 (Previously Presented): An IPATM transmission network, as claimed in claim 1, wherein said MNS means includes border routers adapted to translate between protocols thereby enabling said MNS means to co-exist with other multicast protocols.

Claim 14 (Previously Presented): An IPATM transmission network, as claimed in claim 1, further comprising means for permitting leaf initiated join.

Claim 15 (Previously Presented): An IPATM transmission network, as claimed in claim 1, further comprising means for facilitating an endpoint to switch from functioning as a sender to functioning as a receiver.

Claim 16 (Previously Presented): An IPATM transmission network, as claimed in claim 1, further comprising means for facilitating an endpoint to switch from functioning as a receiver to functioning as a sender.

Claim 17 (Previously Presented): An IPATM transmission network, as claimed in claim 1, further comprising means for enabling a new member to join a group, said means being adapted to cause a join message to be propagated towards a core of said group.

Claim 18 (Previously Presented): An IPATM transmission network, as claimed in claim 1, wherein multipoint-to-multipoint connections are provided at the ATM level.

Claim 19 (Previously Presented): An IPATM transmission network, as claimed in claim 1, wherein ATM switches in said IPATM transmission network are adapted to behave as store and forward units in the presence of contention, and to behave as cell switches in the absence of contention.

Claim 20 (Previously Presented): An IPATM transmission network, as claimed in claim 1, further comprising a VC merging means for preventing interleaving of ATM cells; and

a core selection means for optimising the shape of a structure of a spanning delivery tree.

Claim 21 (Currently Amended): A method of multipoint-to-multipoint multi-casting in an IPATM transmission network comprising a plurality of nodes and a plurality of endpoints adapted to act as data senders, or receivers, said nodes and endpoints being linked by ATM, said method comprising:

building a single spanning delivery tree between at least one sender and all receivers that belong to a multi-casting group of endpoints; ~~and~~

employing only one virtual circuit VC to transmit data over said single spanning delivery tree; and

receiving an address of a core from one of a plurality of MNS servers based on a message passed between at least two of the MNS servers.

Claim 22 (Previously Presented): A method, as claimed in claim 21, wherein said single spanning delivery tree includes a CBT rooted in a core node.

Claim 23 (Previously Presented): A method, as claimed in claim 21, further comprising relocating the core to optimise a structure of said spanning delivery tree.

Claim 24 (Previously Presented): A method, as claimed in claim 21, further comprising forwarding traffic only to those branches of said single spanning delivery tree where said traffic is required.

Claim 25 (Previously Presented): A method, as claimed in claim 22, further comprising propagating join requests from receivers and senders towards said core.

Claim 26 (Previously Presented): A method, as claimed in claim 22, further comprising providing an ATM address for the core for said MNS, when given an IP multi-cast address.

Claim 27 (Previously Presented): A method, as claimed in claim 21, further comprising replicating packets only on branches of said spanning delivery tree where they are needed.

Claim 28 (Previously Presented): A method as claimed in claim 26, further comprising: configuring a host seeking to use said MNS with an ATM address for a local MNS server;

transmitting a query to a local MNS server for an address for the core of said multi-casting group from said host when it seeks to become a member of a multi-casting group;

replying with an ATM address for the core from said local MNS server if it is responsible for the multi-casting group;

passing the query between MNS servers in a MNS hierarchy until the query reaches a MNS server which is responsible for said group and said responsible MNS server replying to the querying host if said local MNS server is not responsible for the group,

wherein said MNS hierarchy includes a root MNS server which knows which server at the next level is responsible for which intervals of multi-cast address space, and second level MNS servers are configured to know how an address range they are responsible for is divided into smaller address intervals and which third level MNS server is responsible for which address interval; and

sending queries through the MNS server hierarchy until reaching the MNS server that holds the tables for the groups for which it is responsible.

Claim 29 (Previously Presented): A method, as claimed in claim 27, further comprising:

starting every MNS server with an empty table; and

dynamically creating entries therein.

Claim 30 (Previously Presented): A method, as claimed in claim 28, wherein said transferring the query further comprises:

passing a query to a root MNS server, which passes it on, if an MNS server is not responsible for a group; and

passing a query only one level up the MNS hierarchy, and not directly to the root MNS server.

Claim 31 (Previously Presented): A method, as claimed in claim 26, further comprising

registering the core node for a multi-cast group with the MNS server responsible for the group;

electing the switch that sent the query as the core if a query arrives at the MNS server about a group and no core is specified for the group, said switch being able to decline nomination as the core; and

not establishing a spanning deliver tree if said switch does not accept nomination as the core.

Claim 32 (Previously Presented): A method, as claimed in claim 26, further comprising:

using a multi-cast group address held by an MNS server located close to group members in a group having members closely located to each other; and

selecting an MNS server located close to said group members by requesting a local MNS server for a new multi-cast group address, said local MNS server then being responsible for supplying a multicast address from its own addresses, and supplying an address for the nearest other MNS server to said local MNS server if said local MNS server has no unused address.

Claim 33 (Previously Presented): A method, as claimed in claim 21, further comprising causing a join message to be propagated towards a core of said group when a new member seeks to join a group.

Claim 34 (Previously Presented): A method as claimed in claim 21, further comprising:

transmitting a leave message towards a core of said group over the spanning delivery tree associated with the group when a member of that group seeks to leave the group, said leave message travelling until it reaches a first junction of said spanning delivery tree; and

removing that part of said spanning delivery tree over which said message has travelled.

Claim 35 (Previously Presented): A method, as claimed in claim 21, further comprising periodically sending an "I am alive" message from group members to neighbouring nodes, or endpoints.

Claim 36 (Previously Presented): A telecommunications system, wherein said telecommunications system includes an IPATM transmission network as claimed in claim 1.

Claim 37 (Currently Amended): An IPATM transmission network that supports multipoint-to-multipoint multi-casting between groups of endpoints, said network comprising:

a plurality of nodes;

a plurality of endpoints adapted to act as data senders, or receivers, said nodes and endpoints being linked by ATM,

wherein said IPATM transmission network includes a single spanning delivery tree building device configured to build a single spanning delivery tree between at least one sender and all receivers that belong to a multi-casting group of endpoints, ~~and~~ only one virtual circuit (VC) is employed to transmit data over said single spanning delivery tree, and an endpoint in the multi-casting group of endpoints receives an address of a core from one of a plurality of MNS servers based on a message passed between at least two of the MNS servers.